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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BOYD, JENNIFER A	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,414	FOSS, STEPHEN W.	
	Examiner	Art Unit	
	Jennifer A Boyd	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 - 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 - 35 of copending Application No. 10/765,255.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 - 35 of the instant application and copending Application No. 10/765,255 claim the same multi-layer filter article; see claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1 – 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9, 10, 13, 23, 30 – 34, 50 – 54, 56, 65 – 66, 70 and 72 - 74 of copending Application No. 10/762,920.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they teach the same multi-layer filter article. Application No. 10/762,920 teaches a component comprising a multi-layered article comprising a first layer comprising bi-component fibers further comprising a core of high tenacity polymer being at least 20 and less than 70% of the fiber by weight and a sheath of hydrolysis resistant polymer being at least 30% of the fiber by weight and including an additive ranging from 0.1% to 20% by weight of the fiber and being selected from the group consisting of pigments, compounds creating a hydrophilic surface, and anti-microbial, anti-fungal and anti-odor materials and at least one further layer. Application No. 10/762,920 teaches a multi-layer component comprising at least one layer further including a binder fiber made from low temperature polymer with melting or softening temperature below 200 degrees C; an anti-microbial additive of an inorganic compound made from a metal chosen from the group consisting of a copper, zinc, tin and silver added to the binder, the additive ranging from 0.1 – 20% by weight of the fiber, and fibers which are free of anti-microbial additive being blended with the binder fiber, said blend of fibers having been heated to its melting temperature, thereby providing a fiber blend which can be used to produce an anti-microbial finished fabric able to withstand significant wear and washings and maintain its effectiveness and at least one further layer. Application No. 10/762,920 teaches that the composite is useful for a wide range of applications including a filtering material, car wash material, mop head fabric, dust mask, humidifier evaporation surface media and boat bilge anti-microbial pad, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1 – 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 85 – 87 and 93 of copending Application No. 10/655,330.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they teach the same multi-layer filter article. Application No. 10/655,330 teaches in claim 85 a textile layer comprising at least one layer comprising multi-component fibers of thermoplastic polymers, each fiber including a core of thermoplastic polymer being at least 20 and less than 70% of the fiber by weight and a sheath being more than 30% of the fiber by weight and including (i) a thermoplastic polymer and (ii) an anti-microbial/anti-fungal inorganic additive being from 0.1% to 20% by weight of fiber, the thickness of the sheath in microns being approximately two times the nominal particle size in microns of the additive. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 4 of the instant application. Claim 86 teaches a textile article including at least one layer comprising bi-component fibers further comprising a core of high tenacity polymer being at least 20 and less than 70% of the fiber by weight and a sheath of hydrolysis resistant polymer being at least 30% of the fiber by weight and including an additive ranging from 0.1% to 20% by weight of the fiber and being selected from the group consisting of pigments, compounds creating a hydrophilic surface, and anti-microbial, anti-fungal and anti-odor materials and at least one further layer. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 15 of the instant application. Claim 87 teaches a textile article including at least one layer comprising a binder fiber made from low

temperature polymer with melting or softening temperature below 200 degrees C; an anti-microbial additive of an inorganic compound made from a metal chosen from the group consisting of a copper, zinc, tin and silver added to the binder, the additive ranging from 0.1 – 20% by weight of the fiber, and fibers which are free of anti-microbial additive being blended with the binder fiber, said blend of fibers having been heated to its melting temperature, thereby providing a fiber blend which can be used to produce an anti-microbial finished fabric able to withstand significant wear and washings and maintain its effectiveness and at least one further layer. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 26 of the instant application. Claim 93 teaches that PETG is included in the binder fiber. It should be noted that the Examiner has given no patentable weight to the limitations of "an air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1 – 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5, 7, 11 13 and 17 of copending Application No. 10/768840.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they teach the same multi-layer filter article. Application No. 10/768840 teaches in claims 1 and 5 a multi-layer laminate comprising one or both layers comprising multi-component fibers of thermoplastic polymers, each fiber including a core of thermoplastic polymer being at least 20 and less than 70% of the fiber by weight and a sheath being more than 30% of the fiber by weight and including (i) a thermoplastic polymer and (ii) an anti-microbial/anti-fungal inorganic additive being from 0.1% to 20% by weight of fiber, the thickness of the sheath in microns being approximately two times the nominal particle size in microns of the additive. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 4. Claims 7 and 11 teach a component comprising a first layer comprising bi-component fibers further comprising a core of high tenacity polymer being at least 20 and less than 70% of the fiber by weight and a sheath of hydrolysis resistant polymer being at least 30% of the fiber by weight and including an additive ranging from 0.1% to 20% by weight of the fiber and being selected from the group consisting of pigments, compounds creating a hydrophilic surface, and anti-microbial, anti-fungal and anti-odor materials and at least one further layer. Claims 13 and 17 teach a multi-layer component comprising at least one layer further including a binder fiber made from low temperature polymer with melting or softening temperature below 200 degrees C; an anti-microbial additive of an inorganic compound made from a metal chosen from the group consisting of a copper, zinc, tin and silver added to the binder, the additive ranging from 0.1 – 20% by weight of the fiber, and fibers which are free of anti-microbial additive being blended with the binder fiber, said blend of fibers having been heated to its melting temperature, thereby providing a fiber

blend which can be used to produce an anti-microbial finished fabric able to withstand significant wear and washings and maintain its effectiveness and at least one further layer. It should be noted that the Examiner has given no patentable weight to the limitations of "an air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 12 - 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/770,306 in view of Rock (US 6,194,332).

Application No. 10/770,306 teaches in claim 1 a bi-component fiber comprising a first component of high tenacity polymer having at least 20 and less than 70% of the fiber by weight and constituting a core; a second component of hydrolysis resistant polymer having at least 30% of the fiber by weight and constituting a sheath surrounding the core, and including an additive; and the additive in the said second component ranging from 0.1% to 20% by weight of the fiber and being selected from the group consisting of pigments, compounds creating a hydrophilic

surface and anti-microbial, anti-fungal and anti-odor materials. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 15.

Application No. 10/770,306 fails to teach that the anti-microbial fiber suitable for producing an anti-microbial finished fabric is incorporated into a multi-layer article.

Rock et al. is directed to an anti-microbial enhanced knit fabric (Title). Rock teaches a fabric comprising a first and second fabric layer wherein the second fabric layer is exclusively blended with treated synthetic fibers having anti-microbial properties (Abstract). Rock teaches that the second layer can comprise polyester (column 3, lines 30 – 35) and the polyester fibers can be coated with silver or copper sulfide to create an anti-microbial fabric layer (column 4, lines 5 – 15).

It would have been obvious to use the sheath-core polyester fiber including an antimicrobial agent as suggested by Application No. 10/770,306 as the anti-microbial fiber in the anti-microbial fabric layer of Rock motivated by the desire to create an anti-microbial composite fabric using economically produced antimicrobial fibers.

As to claims 13 - 22, it should be noted that the Examiner has given no patentable weight to the limitations of "an air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

This is a provisional obviousness-type double patenting rejection.

7. Claims 23 – 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 27 – 28 and 31 of copending Application No. 10/406,720 in view of Rock (US 6,194,332).

Application No. 10/406,720 teaches in claim 27 an anti-microbial fiber comprising a binder fiber made from low temperature polymer with a melting or softening temperature below 200 degrees C, an anti-microbial additive of an inorganic compound made from a metal chosen from the group consisting of copper, zinc, tin and silver added to the binder fiber, the additive ranging from 0.1 – 20% by weight of the fiber and the fibers which are free of anti-microbial additive being blended with said binder fiber, said blend of fibers having been heated to its melting temperature, thereby providing a fiber blend which can be used to produce anti-microbial finished fabric able to withstand significant wear and washings and maintain its effectiveness. Application No. 10/406,720 teaches in claim 28 in that the low temperature polymer is selected from the group consisting of PETG, PE, PP, Co-PET and amorphous PET. Additionally, Application No. 10/406,720 teaches in claim 31 that the non-anti-microbial fiber is selected from the group consisting of cotton, wool, polyester, acrylic and nylon. It is the position of the Examiner that the anti-microbial additive will act as an anti-odor agent as required by claim 26.

Application No. 10/406,720 fails to teach that the anti-microbial fiber suitable for producing an anti-microbial finished fabric is incorporated into a multi-layer article.

Rock et al. is directed to an anti-microbial enhanced knit fabric (Title). Rock teaches a fabric comprising a first and second fabric layer wherein the second fabric layer is exclusively

blended with treated synthetic fibers having anti-microbial properties (Abstract). Rock teaches that the second layer can comprise polyester (column 3, lines 30 – 35) and the polyester fibers can be coated with silver or copper sulfide to create an anti-microbial fabric layer (column 4, lines 5 – 15).

It would have been obvious to use the sheath-core polyester fiber including an antimicrobial agent as suggested by Application No. 10/406,720 as the anti-microbial fiber in the anti-microbial fabric layer of Rock motivated by the desire to create an anti-microbial composite fabric using economically produced antimicrobial fibers.

As to claims 24 – 25 and 28 - 33, it should be noted that the Examiner has given no patentable weight to the limitations of "an air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

This is a provisional obviousness-type double patenting rejection.

8. Claims 1 – 11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 9 of U.S. Patent No. 6,723,428 in view of Rock (US 6,194,332).

U.S. Patent No. 6,723,428 teaches a bi-component fiber comprising a core of thermoplastic polymer having at least 30 and less than 70% of the fiber by weight and a sheath having more than 30% of the fiber by weight and including a thermoplastic polymer and an anti-microbial/anti-fungal additive, and the additive in said sheath is from 0.1% to 20% by weight of the fiber, the thickness of the sheath in microns being approximately two times the nominal particle size in microns of the additive. Claim 9 teaches that the second additive can comprise anti-odor compounds.

U.S. Patent No. 6,723,428 fails to teach that the anti-microbial fiber suitable for producing an anti-microbial finished fabric is incorporated into a multi-layer article.

Rock et al. is directed to an anti-microbial enhanced knit fabric (Title). Rock teaches a fabric comprising a first and second fabric layer wherein the second fabric layer is exclusively blended with treated synthetic fibers having anti-microbial properties (Abstract). Rock teaches that the second layer can comprise polyester (column 3, lines 30 – 35) and the polyester fibers can be coated with silver or copper sulfide to create an anti-microbial fabric layer (column 4, lines 5 – 15).

It would have been obvious to use the sheath-core polyester fiber including an antimicrobial agent as suggested by U.S. Patent No. 6,723,428 as the anti-microbial fiber in the anti-microbial fabric layer of Rock motivated by the desire to create an anti-microbial composite fabric using economically produced antimicrobial fibers.

As to claims 1 - 11, it should be noted that the Examiner has given no patentable weight to the limitations of "an air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation

surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzog et al. (US 6,037,057) in view of Rock (US 6,194,332).

Hartzog is directed to a sheath-core polyester fiber including an antimicrobial agent (Title).

As to claim 1, Hartzog teaches a sheath-core polyester fiber comprising a polyester core and a polyester sheath, wherein the sheath includes an antimicrobial agent (column 3, lines 55 – 65). Hartzog teaches in table 3 that the sheath can comprise 20 - 50% of the fiber, thus implying that core comprising about 80 – 50% of the fiber. Hartzog teaches that the antimicrobial agent is from 0 to 6.95 microns distance from the surface of the sheath (Figure 6), implying that the thickness of the sheath is at least 7 microns. Hartzog teaches that one type of antimicrobial agent used is zinc oxide which ranges in size from 0.5 – 3.5 microns (column 5, lines 45 – 50). It should be noted that if the thickness of the sheath is about 7 microns and the zinc oxide has a size

of 3.5 microns, then the sheath would be about two times the nominal particle size of the zinc oxide.

As to claim 4, it is the position of the Examiner that the inclusion of an antimicrobial agent would result in reduced odor.

As to claim 1, Hartzog fails to teach incorporating the sheath-core polyester fiber including an antimicrobial agent into a multilayer article.

Rock et al. is directed to an anti-microbial enhanced knit fabric (Title). Rock teaches a fabric comprising a first and second fabric layer wherein the second fabric layer is exclusively blended with treated synthetic fibers having anti-microbial properties (Abstract). Rock teaches that the second layer can comprise polyester (column 3, lines 30 – 35) and the polyester fibers can be coated with silver or copper sulfide to create an anti-microbial fabric layer (column 4, lines 5 – 15).

It would have been obvious to use the sheath-core polyester fiber including an antimicrobial agent as suggested by Hartzog as the anti-microbial fiber in the anti-microbial fabric layer of Rock motivated by the desire to create an anti-microbial composite fabric using economically produced antimicrobial fibers (Hartzog, column 3, lines 5 – 15).

As to claims 1 – 11, it should be noted that the Examiner has given no patentable weight to the limitations of "a filter article", "air filter", "water filter", "car wash material", "filter or a batt in a car wash water recycle storage tank", "mop head fabric", "dust mask, "humidifier evaporation surface media and/or circulation/aeration system pad" and "a boat bilge anti-microbial pad". Furthermore, it has been held that a recitation with respect to the manner in

which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Boyd
October 24, 2004

Ula Ruddock
Ula C. Ruddock
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